

FIG. 1

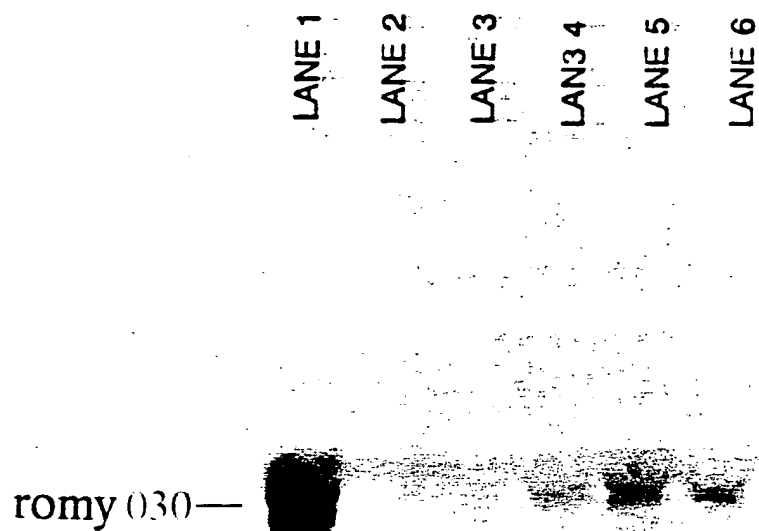


FIG. 4

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GGTGCTGGAGTACCTCATGGCGGTGCCTACCGCTGCACCTACACTCGGAAAGCTTCCGGACTCT  
CTACAACAACCTGTTGGCCCTAAGAGGGTAGAGCTCAGCAGACACACAGTGTCTGTGCCTCCC  
AGAGTAACATGTGGTTCCTTGATGTGCTTCCCCAAAAGCCCCACCTGTGCAGAAATG

(SEQ ID NO: 1)

**FIG. 2**

AAGGAGGCTAGGCTGACCCCTTCCCGCTTGCTCAGCAGCTGAGGCGGCTCAGAAAGCATGGNTAGAGNAGACATTTTGGC 80  
AAGAGGAATGCATCTTTGTGTAATTTCCAGTACAAAGACCCCTACAGATGTTGCTGTGTCAGCTCACAACCCAGCACAT 160  
CCCCCTTTGCCGAGTGGGCTCCAGCACACAGGAGGAGGACACCAAGCAGGACGACACGCGAGTCCGGGAATGGTCTG 240  
TCAGCAACACACACCCAGAGCTACCCCAACAGACTCCTATGGGATTTCTTGAATTCAGGGTGGGGTTACTCCCAATAAGCC 320  
  
ATG TAC ATC CGA GTC TCC TAC GAC ACC AAG CCA GAT TCC CTG CTC CAC CTC ATG GTG AAG 380  
M Y I R V S Y D T K P D S L L H L M V K 20  
  
GAC TGG CAG CTG GAG CTC CCG AAG CTC TTG ATA TCT GTG CAC GGA GGC CTC CAA AGC TTC 440  
D W Q L E L P K L L I S V H G G L Q S F 40  
  
GAG ATG CAG TCC AAA CTG AAG CAG GTG TTT GGG AAA GGT CTG ATC AAG GCT GCC ATG ACC 500  
E M Q S K L K Q V F G K G L I K A A M T 60  
  
ACG GGG GCG TGG ATC TTC ACC GGG GGT GTG AGC ACT GGT GTC GTC AGC CAT GTG GGG GAT 560  
T G A W I F T G G V S T G V V S H V G D 80  
  
GCC TTG AAA GAC CAC TCC AAG TCC AGA GGC CGG CTC TGT GCT ATA GGA ATT GCT CCC 620  
A L K D H S S K S R G R L C A I G I A P 100  
  
TGG GGC ATG GTG GAG AAC AAG GAA GAC CTG ATT GGA AAA GAT GTA ACA AGA GTC TAT CAG 680  
W G M V E N K E D L I G K D V T R V Y Q 120  
  
ACC ATG TCC AAC CCT CTG AGC AAG CTC TCT GTG CTC AAC AAT TCC CAC ACT CAC TTC ATC 740  
T M S N P L S K L S V L N N S H T H F I 140  
  
TTG GCT GAC AAC GGC ACC CTG GGC AAG TAT GGT GCT GAG GTG AAG CTT CGA AGA CAG CTG 800  
L A D N G T L G K Y G A E V K L R R Q L 160  
  
GAA AAA CAC ATC TCC CTG CAG AAG ATC AAC ACA AGG CTG GGC CAG GGT GTA CCT GTC GTG 860  
E K H I S L Q K I N T R L G Q G V P V V 180  
  
GGC CTA GTG GAA GGT CCT AAC GTG GTT TCT ATC GTC CTG GAG TAT CTC AAA GAA 920  
G L V V E G G P N V V S I V L E Y L K E 200

FIG. 3A

**FIG. 3B**

[illegible]

**FIG. 3C**



E P P I P V V I C D G S G R A S D I L S 220  
 GAG CCT CCC ATC CCT GTG GTG ATT TGT GAT GGC AGC GGA CGT GCC TCG GAC ATC CTG TCC 660  
  
 F A H K Y C E E G G I I N E S L R E Q L 240  
 TTT GCG CAC AAG TAC TGT GAA GAA GGC GGA ATA ATA AAT GAG TCC CTC AGG GAG CAG CTT 720  
  
 L V T I Q K T F N Y N K A Q S H Q L F A 260  
 CTA GTT ACC ATT CAG AAA ACA TTT AAT TAT AAT AAG GCA CAA TCA CAT CAG CTG TTT GCA 780  
  
 I I M E C M K K K E L V T V F R M G S E 280  
 ATT ATA ATG GAG TGC ATG AAG AAG AAA GAA CTC GTC ACT GTG TTC AGA ATG GGT TCT GAG 840  
  
 G Q Q D I E M A I L T A L L K G T N V S 300  
 GGC CAG CAG GAC ATC GAG ATG GCA ATT TTA ACT GCC CTG CTG AAA GGA ACA AAC GTA TCT 900  
  
 A P D Q L S L A L A W N R V D I A R S Q 320  
 GCT CCA GAT CAG CTG AGC TTG GCA CTG GCT TGG AAC CGC GTG GAC ATA GCA CGA AGC CAG 960  
  
 I F V F G P H W T P L G S L A P P T D S 340  
 ATC TTT GTC TTT GGG CCC CAC TGG ACG CCC CTG GGA AGC CTG GCA CCC CCG ACG GAC AGC 1020  
  
 K A T E K E K K P P M A T T K G G R G K 360  
 AAA GCC ACG GAG AAG AAG AAG CCA CCC ATG GCC ACC ACC AAG GGA GGA AGA GGA AAA 1080  
  
 G K G K K K G K V K E E V E E E T D P R 380  
 GGG AAA GGC AAG AAG AAA GGG AAA GTG AAA GAG GAA GTG GAG GAA GAA ACT GAC CCC CGG 1140  
  
 K I E L L N W V N A L E Q A M L D A L V 400

FIG. 5B

# FIG. 5C

AAG ATA GAG CTG CTG AAC TGG GTG AAT GCT TTG GAG CAA GCG ATG CTA GAT GCT TTA GTC 1200  
 L D R V D F V K L L I E N G V N M Q H F 420  
 TTA GAT CGT GTC GAC TTT GTG AAG CTC CTG ATT GAA AAC GGA GTG AAC ATG CAA CAC TTT 1260  
 L T I P R L E E L Y N T R L G P P H T L 1440  
 CTG ACC ATT CCG AGG CTG GAG GAG CTT TAT AAC ACA AGA CTG GGT CCA CCA AAC ACA CTT 1320  
 H L L V R D V K K S N L P P D Y H I S L 460  
 CAT CTG CTG GTG AGG GAT GTG AAA AAG AGC AAC CTT CCG CCT GAT TAC CAC ATC AGC CTC 1380  
 I D I G L V L E Y L M G G A Y R C H Y T 480  
 ATA GAC ATC GGG CTC GTG CTG GAG TAC CTC ATG GGA GGA GCC TAC CGC TGC AAC TAC ACT 1440  
 R K N F R T L Y N N L F G P K R P K A L 500  
 CGG AAA AAC TTT CGG ACC CTT TAC AAC AAC TTG TTT GGA CCA AAG AGG CCT AAA GCT CTT 1500  
 K L L G M E D D E P P A K G K K K K K 520  
 AAA CTT CTG GGA ATG GAA GAT GAT GAG CCT CCA GCT AAA GGG AAG AAA AAA AAA AAG 1560  
 K K E E E I D I D V D D P A V S R F Q Y 540  
 AAA AAG GAG GAA GAG ATC GAC ATT GAT GTG GAC GAC CCT GCC GTG AGT CGG TTC CAG TAT 1620  
 P F H E L M V W A V L M K R Q K M A V F 560  
 CCC TTC CAC GAG CTG ATG GTG TGG GCA GTG CTG ATG AAA CGC CAG AAA ATG GCA GTG TTC 1680  
 L W Q R G E E S M A K A L V A C K L Y K 580  
 CTC TGG CAG CGA GGG GAA GAG AGC ATG GCC AAG GCC CTG GTG GCC TGC AAG CTC TAC AAG 1740  
 A M A H E S S E S D L V D D I S Q D L D 600  
 GCC ATG GCC CAC GAG TCC TCC GAG AGT GAT CTG GTG GAT GAC ATC TCC CAG GAC TTG GAT 1800  
 N N S K D F G Q L A L E L L D Q S Y K H 620  
 AAC AAT TCC AAA GAC TTC GGC CAG CTT GCT TTG GAG TTA TTA GAC CAG TCC TAT AAG CAT 1860

FIG. 5C



D E Q I A M K L L T Y E L K N W S N S T 640  
GAC GAG CAG ATC GCT ATG AAA CTC CTG ACC TAC GAG CTG AAA AAC TGG AGC AAC TCG ACC 1920  
C L K L A V A A K H R D F I A H T C S Q 660  
TGC CTC AAA CTG GCC GTG GCA GCC AAA CAC CGG GAC TTC ATT GCT CAC ACC TGC AGC CAG 1980  
M L L T D M W M G R L R M R K N P G L K 680  
ATG CTG CTG ACC GAT ATG TGG ATG CGA AGA CTG CGG ATG CGG AAG AAC CCC GGC CTG AAG 2040  
V I M G I L L P P T I L F L E F R T Y D 700  
GTT ATC ATG GGG ATT CTT CTA CCC ACC ATC TTG TTT TTT GAA TTT CGC ACA TAT GAT 2100  
D F S Y Q T S K E N E D G K E K E E N 720  
GAT TTC TCG TAT CAA ACA TCC AAG GAA AAC GAG GAT GGC AAA GAA AAA GAG GAA AAT 2160  
T D A N A D A G S R K G D E E N E H K K 740  
ACG GAT GCA AAT GCA GAT GCT GGC TCA AGA AAG GGG GAT GAG GAG AAC GAG CAT AAA AAA 2220  
Q R I I P I G T K I C K F Y N A P I V K 760  
CAA AGA ATT ATC CCC ATC GGA ACA AAA ATC TGT AAA TTC TAT AAC GCG CCC ATT GTC AAG 2280  
F W F Y T I S Y L G Y L L L F N Y V I L 780  
TTC TGG TTT TAC ACA ATA TCA TAC TTG GGC TAC CTG CTG TTT AAC TAC GTC ATC CTG 2340  
V R M D G W P S L Q E W I V I S Y I V S 800  
GTG CGG ATG GAT GGC TGG CCG TCC CTC CAG GAG TGG ATC GTC ATC TCC TAC ATC GTG AGC 2400  
L A L E K I R E I L M S E P G K L S Q K 820  
CTG GCG TTA GAG AAG ATA CGA GAG ATC CTC ATG TCA GAA CCA GGC AAA CTC AGC CAG AAA 2460

**FIG. 5D**

I K V W L Q E Y W N I T D L V A I S T F 840  
 ATC AAA GTT TGG CTT CAG GAG TAC TGG AAC ATC ACA GAT CTC GTG GCC ATT TCC ACA TTC 2520  
  
 M I G A M A T R S V M M I G K M M I D M 860  
 ATG ATT GGA GCA ATG GCC ACG AGA TCT GTG ATG ATG ATT GGA AAG ATG ATG ATC GAC ATG 2580  
  
 L Y F V V I M L V V L M S F G V A R Q A 880  
 CTG TAC TTT GTG GTC ATC ATG CTG GTC GTG CTC ATG AGT TTC GGA GTA GCC CGT CAA GCC 2640  
  
 I L H P E E K P S W K L A R N I F Y M P 900  
 ATT CTG CAT CCA GAG GAG AAG CCC TCT TGG AAA CTG GCC CGA AAC ATC TTC TAC ATG CCC 2700  
  
 Y W M I Y G E V F A D Q I D L Y A M E I 920  
 TAC TGG ATG ATC TAT GGA GAG GTG TTT GCA GAC CAG ATA GAC CTC TAC GCC ATG GAA ATT 2760  
  
 N P P C G E N L Y D E E G K R L P P C I 940  
 AAT CCT CCT TGT GGT GAG AAC CTA TAT GAT GAG GAG GGC AAG CGG CTT CCI CCC TGT ATC 2820  
  
 P G A W L T P A L M A C Y L L V A N I L 960  
 CCC GGC GCC TGG CTC ACT CCA GCA CTC ATG GCG TGC TAT CTA CTG GTC GGC AAC ATC CTG 2880  
  
 L V N L L I A V F N N T F F E V K S I S 980  
 CTG GTG AAC CTG CTG ATT GCT GTG TTC AAC AAT ACC TTC TTT GAA GTA AAA TCA ATA TCC 2940  
  
 N Q V W K F Q R Y Q L I M T F H D R P V 1000  
 AAC CAG GTG TGG AAG TTC CAG CGA TAT CAG CTG ATT ATG ACA TTT CAT GAC AGG CCA GTC 3000  
  
 L P P P M I I L S H I Y I I M R L S G 1020  
 CTG CCC CCA CCG ATG ATC ATT TTA AGC CAC ATC TAC ATC ATT ATG CGT CTC AGC GGC 3060  
  
 R C R K K R E G D Q E E R D R G L K L F 1040  
 CGC TGC AGG AAA AAG AGA GAA GGG GAC CAA GAG GAA CGG GAT CGT GGA TTG AAG CTC TTC 3120

FIG. 5E

# FIG. 5F

L S D E E L K R L H E F E E Q C V Q E H	1060
CTT AGC GAC GAG GAG CTA AAG AGG CTG CAT GAG TTC GAG GAG CAG TGC GTG CAG GAG CAC	3180
F R E K E D E Q Q S S S D E R I R V T S	1080
TTC CGG GAG AAG GAG GAT GAG CAG CAG TCG TCC AGC GAC GAG CGC ATC CGG GTC ACT TCT	3240
E R V E N M S M R L E E I N E R E T F M	1100
GAA AGA GTT GAA AAT ATG TCA ATG AGG TTG GAA GAA ATC AAT GAA AGA GAA ACT TTT ATG	3300
K T S L Q T V D L R L A Q L E E L S N R	1120
AAA ACT TCC CTG CAG ACT GTT GAC CTT CGA CTT GCT CAG CTA GAA TTA TCT AAC AGA	3360
M V N A L E N L A G I D R S D L I Q A R	1140
ATG GTG AAT GCT CTT GAA AAT CTT GCG GGA ATC GAC AGG TCT GAC CTG ATC CAG GCA CGG	3420
S R A S S E C E A T Y L L R Q S S I N S	1160
TCC CGG GCT TCT TCT GAA TGT GAG GCA ACG TAT CTT CTC CGG CAA AGC AGC ATC AAT AGC	3480
A D G Y S L Y R Y H F N G E E L L F E D	1180
GCT GAT GGC TAC AGC TTG TAT CGA TAT CAT TTT AAC GGA GAA GAG TTA TTA TTT GAG GAT	3540
T S L S T S P G T G V R K K T C S F R I	1200
ACA TCT CTC TCC ACG TCA CCA GGG ACA GGA GTC AGG AAA ACC TGT TCC TTC CGT ATA	3600
K E E K D V K T H L V P E C Q N S L H L	1220
AAG GAA GAG AAG GAC GTG AAA ACG CAC CTA GTC CCA GAA TGT CAG AAC AGT CTT CAC CTT	3660
S L G T S T S A T P D G S H L A V D D L	1240
TCA CTG GGC ACA AGC ACA TCA GCA ACC CCA GAT GGC AGT CAC CTT GCA GTA GAT GAC TTA	3720

FIG. 5F

K N A E E S K L G P D I G I S K E D D E 1260  
AAG AAC GCT GAA GAG TCA AAA TTA GGT CCA GAT ATT GGG ATT TCA AAG GAA GAT GAT GAA 3780  
R Q T D S K K E E T I S P S L N K T D V 1280  
AGA CAG ACA GAC TCT AAA AAA GAA GAA ACT ATT TCC CCA AGT TTA AAT AAA ACA GAT GTG 3840  
I H G Q D K S D V Q N T Q L T V E T T N 1300  
ATA CAT GGA CAG GAC AAA TCA GAT GTT CAA AAC ACT CAG CTA ACA GTG GAA ACG ACA AAT 3900  
I E G T I S Y P L E E T K I T R Y F P D 1320  
ATA GAA GGC ACT ATT TCC TAT CCC CTG GAA GAA ACC AAA ATT ACA CGC TAT TTC CCC GAT 3960  
E T I N A C K T M K S R S F V Y S R G R 1340  
GAA ACG ATC AAT GCT TGT AAA ACA ATG AAG TCC AGA AGC TTC GTC TAT TCC CGG GGA AGA 4020  
K L V G G V N Q D V E Y S S I T D Q Q L 1360  
AAG CTG GTC GGT GGT AAC CAG GAT GTA GAG TAC AGT TCA ATC ACG GAC CAG CAA TTG 4080  
T T E W Q C Q V Q K I T R S H S T D I P 1380  
ACG ACG GAA TGG CAA TGC CAA GTT CAA AAG ATC ACG CGC TCT CAT AGC ACA GAT ATT CCT 4140  
Y I V S E A A V Q A E Q K E Q F A D M Q 1400  
TAC ATT GTG TCG GAA GCT GCA GTG CAA GCT GAG CAA AAA GAG CAG TTT GCA GAT ATG CAA 4200  
D E H H V A E A I P R I P R L S L T I T 1420  
GAT GAA CAC CAT GTC GCT GAA GCA ATT CCT CGA ATC CCT CGC TTG TCC CTA ACC ATT ACT 4260  
D R N G M E N L L S V K P D Q T L G F P 1440  
GAC AGA AAT GGG ATG GAA AAC TTA CTG TCT GTG AAG CCA GAT CAA ACT TTG GGA TTC CCA 4320  
S L R S K S L H G H P R N V K S I Q G K 1460  
TCT CTC AGG TCA AAA AGT TTA CAT GGA CAT CCT AGG AAT GTG AAA TCC ATT CAG GGA AAG 4380  
L D R S G H A S S V S L V I V S G M T 1480  
TTA GAC AGA TCT GGA CAT GCC AGT AGT GTA AGC AGC TTA GTA ATT GTG TCT GGA ATG ACA 4440  
A E E K K V K K E K A S T E T E C (SEQ ID NO: 7) 1497  
GCA GAA GAA AAA AAG GTT AAG AAA GAG AAA GCT TCC ACA GAA ACT GAA TGC TAG TCTGTT 4991  
TTGTTTCTTTAAATTTTTTTTTTAAACAGTCAGAACCACTAATGGGTGTCATCTTTGGCCATCTTAAACATCCATCCAAT  
TTCCCTAAACAAATTTCCCT

TTCCCTAAACAAATTTCCCT (SEQ ID NO: 6)

FIG. 5G

ACTCATATAGGGNTCGAGCGGCCGCCGGCAGGTTTGAGCTGTGCCCTCTCCATTCCACTGCTGTGGCAGGGTCAGA  
 AATCTTGGATAGAGAAACCTTTTGCAAACGGGAATGTATCTTTGTAAATCTTAGCACGAAAGACTCTAACAGGTGTG  
 CTGTGGCCAGTTACCAACACCATATCCCCCTCTGCCAAGTGCACACCCAGCAAAATGAAGAGGAAAGCAAAACAG  
 GTGAGACTCAGCTGAGAAATGGTCTGTGCAAGCACACCCAGAGCTACCCAAACAGATTCTATGGAGTTCTTTGAATT  
 CCAGGTGGCGGATATTCCAATAAGCC

M	Y	I	R	V	S	Y	D	T	K	P	D	S	L	L	H	L	M	V	K	20
ATG	TAT	ATC	CGT	GTA	TCC	TAT	GAC	ACC	AAG	CCA	GAC	TCA	CTG	CTC	CAT	CTC	ATG	GTG	AAA	60
D	W	Q	L	E	L	P	K	L	L	I	S	V	H	G	G	L	Q	H	F	100
GAT	TGG	CAG	CTG	GAA	CTC	CCC	AAG	CTC	TTA	ATA	TCT	GTG	CAT	GGA	GGC	CTC	CAG	AAC	TTT	120
E	M	Q	P	K	L	K	Q	V	F	G	K	G	L	I	K	A	A	H	T	160
GAG	ATG	CAG	CCC	AAG	CTG	AAA	CAA	GTC	TTT	GGG	AAA	GGC	CTG	ATC	AAG	GCT	GCT	ATG	ACC	180
T	G	A	W	I	F	T	G	G	V	S	T	G	V	I	S	H	V	G	D	220
ACC	GGG	GCC	TGG	ATC	TTC	ACC	GGG	GGT	GTC	AGC	ACA	GGT	GTT	ATC	AGC	CAC	GTA	GGG	GAT	240
A	L	K	D	H	S	S	K	S	R	G	R	V	C	A	I	G	I	A	P	280
GCC	TTG	AAA	GAC	CAC	TCC	TCC	AAG	TCC	AGA	GGC	CGG	GTT	TGT	GCT	ATA	GGA	ATT	GCT	CCA	300
W	G	I	V	E	N	K	E	D	L	V	G	K	D	V	T	R	V	Y	Q	320
TGG	GGC	ATC	GTG	GAG	AAT	AAG	GAA	GAC	CTG	GTT	GGA	AAG	GAT	GTA	ACA	AGA	GTG	TAC	CAG	360
T	M	S	N	P	L	S	K	L	S	V	L	N	N	S	H	T	H	F	I	400
ACC	ATG	TCC	AAC	CCT	CTA	AGT	AAG	CTC	TCT	GTG	CTC	AAC	AAC	TCC	CAC	ACC	CAC	TTC	ATC	420
L	A	D	N	G	T	L	G	K	Y	G	A	E	V	K	L	R	R	L	L	440
CTG	GCT	GAC	AAT	GGC	ACC	CTG	GGC	AAG	TAT	GGC	GCC	GAG	GTG	AAG	CTG	CGA	AGG	CTG	CTG	480
E	K	H	I	S	L	Q	K	I	N	T	R	L	G	Q	G	V	P	L	V	500
GAA	AAG	CAC	ATC	TCC	CTC	CAG	AAG	ATC	AAC	ACA	AGA	CTG	GGG	CAG	GGC	GTG	CCC	CTC	GTG	540
G	L	V	V	E	G	G	P	N	V	V	S	I	V	L	E	Y	L	Q	E	580
GGT	CTC	GTG	GTG	GAG	GGG	GGC	CCT	AAC	GTG	GTG	TCC	ATC	GTC	TTG	GAA	TAC	CTG	CAA	GAA	600

**FIG. 6A**

# FIG. 6B

E P P I P V V I C D G S G R A S D I L S	220
GAG CCT CCC ATC CCT GTG GTG ATT TGT GAT GGC AGC GGA CGT GCC TCG GAC ATC CTG TCC	660
F A H K Y C E E G G I I N E S L R E Q L	240
TTT GCG CAC AAG TAC TGT GAA GAA GGC GGA ATA ATA AAT GAG TCC CTC AGG GAG CAG CTT	720
L V T I Q K T F N Y N K A Q S H Q L F A	260
CTA GTT ACC ATT CAG AAA ACA TTT AAT AAT AAG GCA CAA TCA CAT CAG CTG TTT GCA	780
I I M E C M K K K E L V T V F R M G S E	280
ATT ATA ATG GAG TGC ATG AAG AAG AAA GAA CTC GTC ACT GTG TTC AGA ATG GGT TCT GAG	840
G Q Q D I E M A I L T A L L K G T N V S	300
GGC CAG CAG GAC ATC GAG ATG GCA ATT TTA ACT GCC CTG CTG AAA GGA ACA AAC GTA TCT	900
A P D Q L S L A L A W N R V D I A R S Q	320
GCT CCA GAT CAG CTG AGC TTG GCA CTG GCT TGG AAC CGC GTG GAC ATA GCA CGA AGC CAG	960
I F V F G P H W T P L G S L A P P T D S	340
ATC TTT GTC TTT GGG CCC CAC TGG ACG CCC CTG GGA AGC CTG GCA CCC CCG ACG GAC AGC	1020
K A T E K E K K P P M A T T K G G R G K	360
AAA GCC ACG GAG AAG GAG AAG CCA CCC ATG GCC ACC ACC AAG GGA GGA AGA GGA AAA	1080
G K G K K K G K V K E E V E E T D P R	380
GGG AAA GGC AAG AAG AAA GGG AAA GTG AAA GAG GAA CTG GAG GAA ACT GAC CCC CGG	1140
K I E L L N W V N A L E Q A M L D A L V	400

FIG. 6B

AAG ATA GAG CTG AAC TGG GTG AAT GCT TTG GAG CAA GCG ATG CTA GAT GCT TTA GTC 1200  
L D R V D F V K L L I E N G V N M Q H F 420  
TTA GAT CGT GTC GAC TTT GTG AAG CTC CTG ATT GAA AAC GGA GTG AAC ATG CAA CAC TTT 1260  
L T I P R L E E L Y N T R L G P P N T L 440  
CTG ACC ATT CCG AGG CTG GAG GAG CTT TAT AAC ACA AGA CTG GGT CCA CCA AAC ACA CTT 1320  
H L L V R D V K K S N L P P D Y H I S L 460  
CAT CTG CTG AGG GAT GTG AAA AAG AGC AAC CTT CCG CCT GAT TAC CAC ATC AGC CTC 1380  
I D I G L V L E Y L M G G A Y R C N Y T 480  
ATA GAC ATC GGG CTC GTG CTG GAG TAC CTC ATG GGA GGA GCC TAC CGC TGC AAC TAC ACT 1440  
R K N F R T L Y N N L F G P K R P K A L 500  
CGG AAA AAC TTT CGG ACC CTT TAC AAC AAC TTG TTT GGA CCA AAG AGG CCT AAA GCT CTT 1500  
K L L G M E D D E P P A K G K K K K K 520  
AAA CTT CTG GGA ATG GAA GAT GAT GAG CCT CCA GCT AAA GGG AAG AAA AAA AAA AAG 1560  
K K E E E I D I D V D P A V S R F Q Y 540  
AAA AAG GAG GAA GAT GAC ATC GAT GAT GTG GAC GAC CCT GCC GTG AGT CGG TTC CAG TAT 1620  
P F H E L M V W A V L M K R Q K M A V F 560  
CCC TTC CAC GAG CTG ATG GTG TGG GCA GTG CTG ATG AAA CGC CAG AAA ATG GCA GTG TTC 1680  
L W Q R G E E S M A K A L V A C K L Y K 580  
CTC TGG CAG CGA GGG GAA GAG AGC ATG GCC AAG GCC CTG GTG GCC TGC AAG CTC TAC AAG 1740  
A M A H E S S E S D L V D D I S Q D L D 600  
GCC ATG GCC CAC GAG TCC TCC GAG AGT GAT CTG GTG GAT GAC ATC TCC CAG GAC TTG GAT 1800  
N N S K D F G Q L A L E L L D Q S Y K H 620  
AAC AAT TCC AAA GAC TTC GGC CAG CTT GCT TTG GAG TTA TTA GAC CAG TCC TAT AAG CAT 1860

**FIG. 6C**

D E Q I A M K L L T Y E L K N W S N S T 640  
GAC GAG CAG ATC GCT ATG AAA CTC CTG ACC TAC GAG CTG AAA AAC TGG AGC AAC TCG ACC 1920  
C L K L A V A A K H R D F I A H T C S Q 660  
TGC CTC AAA CTG GCC GTG GCA GCC AAA CAC CGG GAC TTC ATT GCT CAC ACC TGC AGC CAG 1980  
M L L T D M W M G R L R M R K N P G L K 680  
ATG CTG CTG ACC GAT ATG TGG ATG GGA AGA CTG CGG ATG CGG AAG AAC CCC GGC CTG AAG 2040  
V I M G I L L P P T I L F L E F R T Y D 700  
GTT ATC ATG GGG ATT CTT CTA CCC ACC ACC ATC TTG TTT TTG GAA TTT CGC ACA TAT GAT 2100  
D F S Y Q T S K E N E D G K E K E E E N 720  
GAT TTC TCG TAT CAA ACA TCC AAG GAA AAC GAG GAT GGC AAA GAA GAA GAG GAA AAT 2160  
T D A N A D A G S R K G D E E N E H K K 740  
ACG GAT GCA AAT GCA GAT GCT GGC TCA AGA AAG GGG GAT GAG GAG AAC GAG CAT AAA AAA 2220  
Q R I I P I G T K I C K F Y N A P I V K 760  
CAA AGA ATT ATC CCC ATC GGA ACA AAA ATC TGT AAA TTC TAT AAC GCG CCC ATT GTC AAG 2280  
F W F Y T I S Y L G Y L L L F N Y V I L 780  
TTC TGG TTT TAC ACA ATA TCA TAC TTG GGC TAC CTG CTG CTG TTT AAC TAC GTC ATC CTG 2340  
V R M D G W P S L Q E W I V I S Y I V S 800  
GTG CGG ATG GAT GGC TGG CCG TCC CTC CAG GAG TGG ATC GTC ATC TCC TAC ATC GTG AGC 2400  
L A L E K I R E I L M S E P G K L S Q K 820  
CTG GCG TTA GAG AAG ATA CGA GAG ATC CTC ATG TCA GAA CCA GGC AAA CTC AGC CAG AAA 2460

FIG. 6D



I K V W L Q E Y W N I T D L V A I S T F 840  
 ATC AAA GTT TGG CTT CAG GAG TAC TGG AAC ATC ACA GAT CTC GTG GCC ATT TCC ACA TTC 2520  
  
 M I G A I L R L Q N Q P Y M G Y G R V I 860  
 ATG ATT GGA GCA ATT CTT CGC CTA CAG AAC CAG CCC TAC ATG GGC TAT GGC CGG GTG ATC 2580  
  
 Y C V D I I F W Y I R V L D I F G V N K 880  
 TAC TGT GTG GAT ATC ATC TTC TGG TAC ATC CGT GTC CTC GAC ATC TTT GGT GTC AAC AAG 2640  
  
 Y L G P Y V M M I G K M M I D M L Y F V 900  
 TAT CTG GGG CCA TAC GTG ATG ATG ATT GGA AAG ATG ATG ATC GAC ATG CTG TAC TTT GTG 2700  
  
 V I M L V V L M S F G V A R Q A I L H P 920  
 GTC ATC ATG CTG GTG CTC ATG AGT TTC GGA GTA GCC CGT CAA GCC ATT CTG CAT CCA 2760  
  
 E E K P S W K L A R N I F Y M P Y W M I 940  
 GAG GAG AAG CCC TCT TGG AAA CTG GCC CGA AAC ATC TTC TAC ATG CCC TAC TGG ATG ATC 2820  
  
 Y G E V F A D Q I D L Y A N E I N P P C 960  
 TAT GGA GAG GTG TTT GCA GAC CAG ATA GAC CTC TAC GCC ATG GAA ATT AAT CCT CCT TGT 2880  
  
 G E N L Y D E E G K R L P P C I P G A W 980  
 GGT GAG AAC CTA TAT GAT GAG GAG GGC AAG CGG CTT CCT CCC TGT ATC CCC GGC GCC TGG 2940  
  
 L T P A L M A C Y L L V A N I L L V N L 1000  
 CTC ACT CCA GCA CTC ATG GCG TGC TAT CTA CTG GTC GCC AAC ATC CTG CTG GTG AAC CTG 3000  
  
 L I A V F N N T F F E V K S I S N Q V W 1020  
 CTG ATT GCT GTG TTC AAC AAT ACT TTC TTT GAA GTA AAA TCA ATA TCC AAC CAG GTG TGG 3060  
  
 K F Q R Y Q L I M T F H D R P V L P P 1040  
 AAG TTC CAG CGA TAT CAG CTG ATT ATG ACA TTT CAT GAC AGG CCA GTC CTG CCC CCA CCG 3120

FIG. 6E

M I I L S H I I Y I I I I M R L S G R C R K	1060
ATG ATC ATT TTA AGC CAC ATC TAC ATC ATC ATT ATG CGT CTC AGC GGC CGC TGC AGG AAA	3180
K R E G D Q E E R D R G L K L F L S D E	1080
AAG AGA GAA GGG GAC CAA GAG GAA CGG GAT CGT GGA TTG AAG CTC TTC CTT AGC GAC GAG	3240
E L K R L H E F E E Q C V Q E H F R E K	1100
GAG CTA AAG AGG CTG CAT GAG TTC GAG GAG CAG TGC GTG CAG CAC TTC CGG GAG AAG	3300
E D E Q Q S S S D E R I R V T S E R V E	1120
GAG GAT GAG CAG CAG TCG TCC AGC GAC GAG CGC ATC CGG GTC ACT TCT GAA AGA GTT GAA	3360
N M S M R L E E I N E R E T F M K T S L	1140
AAT ATG TCA ATG AGG TTG GAA GAA ATC AAT GAA AGA GAA ACT TTT ATG AAA ACT TCC CTG	3420
Q T V D L R L A Q L E E L S N R M V N A	1160
CAG ACT GTT GAC CTT CGA CTT GCT CAG CTA GAA GAA TTA TCT AAC AGA ATG GTG AAT GCT	3480
L E N L A G I D R S D L I Q A R S R A S	1180
CTT GAA AAT CTT GCG GGA ATC GAC AGG TCT GAC CTG ATC CAG GCA CGG TCC CGG GCT TCT	3540
S E C E A T Y L L R Q S S I N S A D G Y	1200
TCT GAA TGT GAG GCA ACG TAT CTT CTC CGG CAA AGC AGC ATC AAT AGC GCT GAT GGC TAC	3600
S L Y R Y H F N G E E L L F E D T S L S	1220
AGC TTG TAT CGA TAT CAT TTT AAC GGA GAA GAG TTA TTA TTT GAG GAT ACA TCT CTC TCC	3660
T S P G T G V R K K T C S F R I K E E K	1240
ACG TCA CCA GGG ACA GGA GTC AGG AAA ACC TGT TCC TTC CGT ATA AAG GAA GAG AAG	3720

FIG. 6F

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

D V K T H L V P E C Q N S L H L S L G T 1260  
GAC GTG AAA ACG CAC CTA GTC CCA GAA TGT CAG AAC AGT CTT CAC CTT TCA CTG GGC ACA 3780

S T S A T P D G S H L A V D D L K H A E 1280  
AGC ACA TCA GCA ACC CCA GAT GGC AGT CAC CTT GCA GTA GAT GAC TTA AAG AAC GCT GAA 3840

E S K L G P D I G I S K E D D E R Q T D 1300  
GAG TCA AAA TTA GGT CCA GAT ATT GGG ATT TCA AAG GAA GAT GAT GAA AGA CAG ACA GAC 3900

S K K E E T I S P S L N K T D V I H G Q 1320  
TCT AAA AAA GAA GAA ACT ATT TCC CCA AGT TTA AAT AAA ACA GAT GTG ATA CAT GGA CAG 3960

D K S D V Q N T Q L T V E T T N I E G T 1340  
GAC AAA TCA GAT GTT CAA AAC ACT CAG CTA ACA GTG GAA ACG ACA AAT ATA GAA GGC ACT 4020

I S Y P L E E T K I T R Y F P D E T I N : 1360  
ATT TCC TAT CCC CTG GAA ACC AAA ATT ACA CGC TAT TTC CCC GAT GAA ACG ATC AAT 4080

A C K T M K S R S F V Y S R G R K L V G 1380  
GCT TGT AAA ACA ATG AAG TCC AGA AGC TTC GTC TAT TCC CGG GGA AGA AAG CTG GTC GGT 4140

G V N Q D V E Y S S I T D Q Q L T T E W 1400  
GGG GTT AAC CAG GAT GTA GAG TAC AGT TCA ATC ACG GAC CAG CAA TTG ACG ACG GAA TGG 4200

Q C Q V Q K I T R S H S T D I P Y I V S 1420  
CAA TGC CAA GTT CAA AAG ATC ACG CGC TCT CAT AGC ACA GAT ATT CCT TAC ATT GTG TCG 4260

E A A V Q A E Q K E Q F A D M Q D E H H 1440  
GAA GCT GCA GTG CAA GCT GAG CAA AAA GAG CAG TTT GCA GAT ATG CAA GAT GAA CAC CAT 4320

FIG. 6G

V A E A I P R I P R L S L T I T D R N G 1460  
GTC GCT GAA GCA ATT CCT CGA ATC CCT CGC TTG TCC CTA ACC ATT ACT GAC AGA AAT GGG 4380  
M E N L L S V K P D Q T L G F P S L R S 1480  
ATG GAA AAC TTA CTG TCT GTG AAG CCA GAT CAA ACT TTG GGA TTC CCA TCT CTC AGG TCA 4440  
K S L H G H P R N V K S I Q G K L D R S 1500  
AAA AGT TTA CAT GGA CAT CCT AGG AAT GTG AAA TCC ATT CAG GGA AAG TTA GAC AGA TCT 4500  
G H A S S V S S L V I V S G M T A E E K 1520  
GGA CAT GCC AGT AGT GTA AGC AGC TTA GTA ATT GTG TCT GGA ATG ACA GCA GAA GAA AAA 4560  
K V K K E K A S T E T E C \* (SEQ ID NO: 9) 1533  
AAG GTT AAG AAA GAG AAA GCT TCC ACA GAA ACT GAA TGC TAG TCTGTTTGTCTTTAATTTTT 4599  
TTTTTTAACAGTCAGAAACCCACTAATGGGTGTCATCTTGGCCCATCCTAAACACATTTCCCAATTTCCTAAAAACATTT  
TCCCT (SEQ ID NO: 8)

FIG. 6H